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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/529,255	04/11/2000	TAKANORI SHINOKI	2000-0465A	5270

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EXAMINER

BOYD, JENNIFER A

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/529,255

Applicant(s)

SHINOKI ET AL.

Examiner

Jennifer A. Boyd

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-11, 17 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-11, 17 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION***Response to Amendment***

1. The Applicant's Amendments and Accompanying Remarks, filed February 16, 2005, have been entered and have been carefully considered. Claims 9 and 18 are amended, claims 12 – 16 are withdrawn and claims 9 – 18 are pending. In view of Applicant's amendments providing more physical and chemical details of the support member, the Examiner withdraws the 35 USC 112, second paragraph rejection of claims 9 – 11 and 17 – 18 as detailed in paragraph 3 of the Office Action dated November 16, 2004. In view of Applicant's amendment requiring that the web is heat bound together using a heat weldable binder fiber where the heat weldable binder fiber is present in the weight ratio of 70:30 – 30:70, the Examiner withdraws the rejection as being unpatentable over Pall as detailed in paragraph 4 and as being unpatentable over Shinjou as detailed in paragraph 5 of the Office Action dated November 16, 2004. After another search was conducted, additional prior art has been found which renders in the invention as currently claimed unpatentable for reasons herein below.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claims 9 – 11 and 17 – 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goettmann (US 5,851,355).

Goettmann is directed to a reverse osmosis support substrate and method for its

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manufacture (Title).

Goettmann teaches support substrate comprising 5 – 40% by weight of 0.2 – 3.0 denier first polyester staple fiber, 0 – 60% of a second polyester staple fiber having a denier greater than first polyester staple fiber but still in the range from 0.2 – 3.0, 15 – 50% by weight of a first binder fiber and 1 – 10 % by weight of a second binder fiber (column 3, lines 55 – 67). The Examiner equates the first and second polyester fibers to Applicant's "polyester fiber" and first and second binder fiber to Applicant's "binder fiber". Goettmann teaches that the sheet porosity is in the range between 5 – 10 cfm (column 3, lines 1 – 10). According to www.frazierinstrument.com, the air permeability value of 5 – 10 cfm can be converted to Applicant's units of cc/cm²s by multiplying cfm by 0.508. Therefore, 5 – 10 cfm is equivalent to 2.54 – 5.08 cc/cm²s. The nonwoven is made by a wet-laying process and then thermally bonded under controlled temperature and pressure conditions (column 4, lines 20 – 34). Goettmann teaches that a thin film of polysulfone is attached to the nonwoven support substrate (column 6, lines 45 – 55) as required by claims 17 and 18.

As to claim 11, it should be noted that the most common type of polyester is polyethylene terephthalate, so it is the position of the Office that the polyester of Goettmann would be polyethylene terephthalate. According to Applicant's Specification on pages 13 – 14, polyethylene terephthalate meets the chemical limitations of claim 11.

Goettmann discloses the claimed invention except for that the pore size is 42 micrometers or less as required by claims 9 and 18. It would have been obvious to one having ordinary skill in the art at the time the invention was made to create a support

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member having a maximum pore size of 42 micrometers or less since it has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454 USPQ 233 (CCPA 1955). In the present invention, one would have been motivated to optimize the pore size to create a support member with optimal permeability.

Although Goettmann does not explicitly teach the claimed double refraction of 0.170 or more, a heat shrinkage stress at 200 degrees Celsius of 0.10-0.60 g/d and a mean value of breaking length at an elongation of 5% in a lengthwise direction (MD) and a crosswise direction (CD) of 4.0km or more, it is reasonable to presume that double refraction of 0.170 or more, a heat shrinkage stress at 200 degrees Celsius of 0.10-0.60 g/d and a mean value of breaking length at an elongation of 5% in a lengthwise direction (MD) and a crosswise direction (CD) of 4.0km or more is inherent. Support for said presumption is found in the use of like materials (i.e. substrate 5 – 40% by weight of 0.2 – 3.0 denier first polyester staple fiber, 0 – 60% of a second polyester staple fiber having a denier greater than first polyester staple fiber but still in the range from 0.2 – 3.0, 15 – 50% by weight of a first binder fiber and 1 – 10 % by weight of a second binder fiber having an air permeability between 2.54 – 5.08 cc/cm²s) which would result in the claimed properties. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed properties of double refraction of 0.170 or more, a heat shrinkage stress at 200 degrees Celsius of 0.10-0.60 g/d and a mean value of breaking length at an elongation of 5% in a lengthwise direction (MD) and a crosswise

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direction (CD) of 4.0km or more would obviously have been present once the Goettmann product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977).

Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same or an obvious variant from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the Applicant to show unobvious differences between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292 (Fed. Cir. 1983).

Response to Arguments

4. Applicant's arguments with respect to claims 9 – 11 and 17 - 18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within


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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Boyd whose telephone number is 571-272-1473. The examiner can normally be reached on Monday thru Friday (8:30am - 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jennifer Boyd
May 6, 2005


Ula C. Ruddock
Primary Examiner
Tech Center 1700